

CLAIMS

What is claimed is:

- 1 1. A method for handling requests for web services, the method comprising the
2 computer-implemented steps of:
3 receiving, from a source, a request for information from a particular web service that
4 has characteristics that are described in Web Service Description Language
5 and are published in a Universal Description, Discovery, and Integration
6 registry;
7 in response to receiving said request, accessing transformation information that
8 specifies
9 how to transform first data associated with said request to second data that
10 said particular web service can use to service requests for said
11 requested information, and
12 how to invoke said particular web service in a manner required by said
13 particular web service, to obtain said requested information from said
14 particular web service;
15 based on said transformation information,
16 transforming said first data to said second data; and
17 invoking, in said manner required by said particular web service, said
18 particular web service to obtain said requested information from said
19 particular web service.

- 1 2. The method of Claim 1, further comprising the steps of:
2 receiving, from said particular web service, said requested information; and

3 transforming, based on said transformation information, said requested information to
4 data that said source can use.

1 3. The method of Claim 1, wherein said transformation information specifies how to
2 transform a plurality of first data each from a respective source of a plurality of
3 sources, to a plurality of second data each for a respective web service of a plurality
4 of web services.

1 4. The method of Claim 1, wherein said transformation information includes a mapping
2 of first data from a first particular source to second data that a web service can use,
3 and a mapping of first data from a second particular source to second data that a web
4 service can use, and wherein said first data from said first particular source has a
5 different form than said first data from said second particular source.

1 5. The method of Claim 1, wherein said transformation information includes a mapping
2 of first data from a first particular source to second data that a first web service can
3 use, and a mapping of first data from a second particular source to said second data
4 that said first web service can use, and wherein said first data from said first particular
5 source has a different form than said first data from said second particular source.

1 6. The method of Claim 1, wherein said transformation information includes a mapping
2 of first data from a first source to second data that a first web service can use and to
3 second data that a second web service can use, and wherein said first web service is
4 different than said second web service.

1 7. The method of Claim 1, further comprising the computer-implemented steps of:

2 based on said transformation information, determining whether to use RPC style of
3 communication or messaging style of communication to invoke said particular
4 web service.

1 8. The method of Claim 1, further comprising the computer-implemented steps of:
2 based on said transformation information, determining whether to use SOAP
3 encoding to encode a communication for invoking said particular web service.

1 9. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 1.

1 10. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 2.

1 11. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 3.

1 12. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 4.

1 13. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 5.

1 14. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 6.

1 15. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 7.

1 16. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 8.

1 17. A method for handling requests for web services, the method comprising the
2 computer-implemented steps of:
3 receiving, from a source, a request for information, wherein said request includes an
4 identification of a particular instance of said source;
5 in response to receiving said request, based on said identification of said particular
6 instance of said source, accessing transformation information;
7 wherein said transformation information includes a mapping between said
8 identification of said particular instance of said source and an identification of
9 a particular web service from which said particular instance wants said
10 requested information;
11 wherein said transformation information specifies how to transform first data
12 associated with said request to second data that said particular web service can
13 use to service requests for said requested information; and

14 based on said transformation information, transforming said first data to said second
15 data.

1 18. The method of Claim 17, wherein said identification of a particular instance of said
2 source includes identification of a user of said source.

1 19. The method of Claim 17, further comprising the computer-implemented step of:
2 passing said second data as input to said particular web service to service said
3 request.

1 20. The method of Claim 19,
2 wherein said transformation information specifies a mapping between said first data
3 output from said source and data that said particular web service can use as
4 input to determine said requested information; and
5 wherein said step of passing includes passing said second data, according to said
6 transformation information, as input to said particular web service to
7 determine said requested information.

1 21. The method of Claim 20,
2 wherein said transformation information specifies a first manner in which said
3 particular web service can be invoked to service requests for said requested
4 information; and
5 wherein said step of passing includes passing said second data in said first manner, to
6 invoke said particular web service to determine said requested information.

1 22. The method of Claim 21,

2 wherein said transformation information specifies a second manner in which said
 3 second data is characterized so that said particular web service can be invoked
 4 to service requests for said requested information; and
 5 wherein said step of passing includes passing, according to said first manner, said
 6 second data that is characterized according to said second manner, to invoke
 7 said particular web service to determine said requested information.

1 23. The method of Claim 22, wherein said second manner includes characterizing said
 2 second data according to Simple Object Access Protocol.

1 24. The method of Claim 19,
 2 wherein said transformation information specifies a first manner in which said
 3 particular web service can be invoked to service requests for said requested
 4 information and a second manner in which said second data is characterized in
 5 an invocation of said particular web service; and
 6 wherein said step of passing includes passing, according to said first manner, said
 7 second data that is characterized according to said second manner, to invoke
 8 said particular web service to determine said requested information.

1 25. The method of Claim 17, wherein said particular web service has characteristics that
 2 are described in Web Service Description Language.

1 26. The method of Claim 25, wherein said particular web service has characteristics that
 2 are published in a Universal Description, Discovery, and Integration registry.

1 27. The method of Claim 17, further comprising the steps of:

2 receiving, from said particular web service, said requested information; and
3 transforming, based on said transformation information, said requested information to
4 data that said source can use.

1 28. The method of Claim 17, wherein said transformation information specifies how to
2 transform a plurality of first data each from a respective source of a plurality of
3 sources, to a plurality of second data each for a respective web service of a plurality
4 of web services.

1 29. The method of Claim 17, wherein said transformation information includes a
2 mapping of first data from a first particular source to second data that a web service
3 can use, and a mapping of first data from a second particular source to second data
4 that a web service can use, and wherein said first data from said first particular source
5 has a different form than said first data from said second particular source.

1 30. The method of Claim 17, wherein said transformation information includes a
2 mapping of first data from a first particular source to second data that a first web
3 service can use, and a mapping of first data from a second particular source to said
4 second data that said first web service can use, and wherein said first data from said
5 first particular source has a different form than said first data from said second
6 particular source.

1 31. The method of Claim 17, wherein said transformation information includes a
2 mapping of first data from a first source to second data that a first web service can use
3 and to second data that a second web service can use, and wherein said first web
4 service is different than said second web service.

1 32. The method of Claim 31, wherein said first web service and said second web service
2 can determine the same requested information, and wherein said second data that said
3 first web service can use is different from said second data that said second web
4 service can use.

1 33. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 17.

1 34. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 18.

1 35. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 19.

1 36. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 20.

1 37. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 21.

1 38. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 22.

1 39. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 23.

1 40. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 24.

1 41. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 25.

1 42. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 26.

1 43. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 27.

1 44. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 28.

1 45. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 29.

1 46. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 30.

1 47. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 31.

1 48. A computer-readable medium carrying one or more sequences of instructions which,
2 when executed by one or more processors, causes the one or more processors to
3 perform the method recited in Claim 32.

1 49. A system for handling requests for web services, the system comprising:
2 means for receiving, from a source, a request for information from a particular web
3 service that has characteristics that are described in Web Service Description
4 Language and are published in a Universal Description, Discovery, and
5 Integration registry;

6 means for accessing, in response to receiving said request, transformation information
 7 that specifies
 8 how to transform first data associated with said request to second data that
 9 said particular web service can use to service requests for said
 10 requested information, and
 11 how to invoke said particular web service in a manner required by said
 12 particular web service, to obtain said requested information from said
 13 particular web service;
 14 means for transforming, based on said transformation information, said first data to
 15 said second data; and
 16 means for invoking, based on said transformation information, said particular web
 17 service in said manner required by said particular web service to obtain said
 18 requested information.

1 50. An system for handling requests for web services, the system comprising:
 2 means for receiving, from a source, a request for information, wherein said request
 3 includes an identification of a particular instance of said source;
 4 means for accessing transformation information in response to receiving said request
 5 and based on said identification of said particular instance of said source;
 6 wherein said transformation information includes a mapping between said
 7 identification of said particular instance of said source and an identification of
 8 a particular web service from which said particular instance wants said
 9 requested information;

10 wherein said transformation information specifies how to transform first data
11 associated with said request to second data that said particular web service can
12 use to service requests for said requested information; and
13 means for transforming said first data to said second data based on said
14 transformation information.